IMPERIAL
DEPARTMENT OF AGRICULTURE
FOR THE WEST INDIES.

REPORT

ON THE

AGRICULTURAL DEPARTMENT

DOMINICA

1924-25.

TRINIDAD

ISSUED BY THE IMPERIAL COMMISSIONER OF AGRICULTURE

FOR THE WEST INDIES.

1926.

[PRICE SIXPENCE.]

Printed at the BULLETIN OFFICE, Roseau, Dominica, B.W.I.

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LETTER OF TRANSMITTAL

The Commissioner of Agriculture to the Administrator, Dominica.

COPY

D. 1876. TRINIDAD, 16th October, 1925.

SIR,

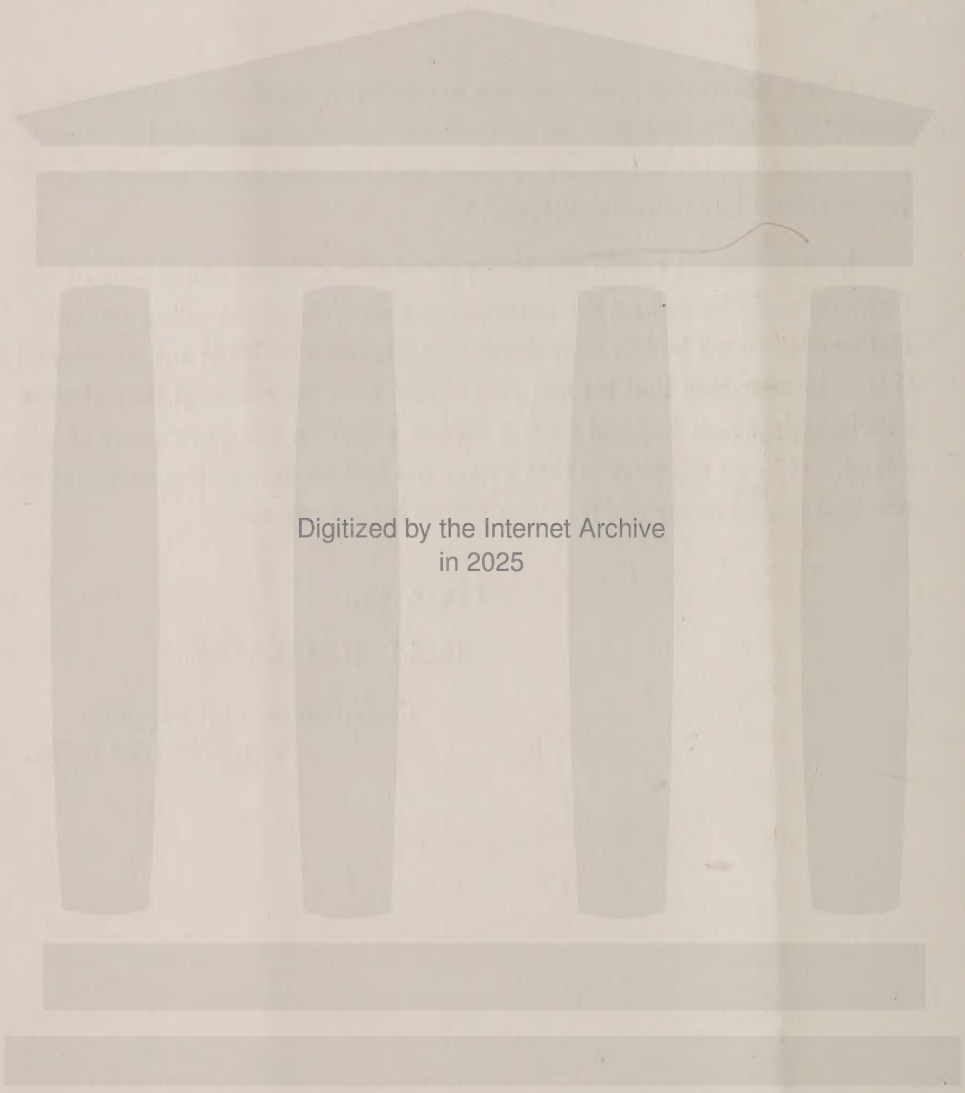
I have the honour to forward the Report of the Agricultural Department, Dominica, for the year 1924-25. The Report contains a good deal of valuable information and the accumulative experience obtained from the lime experiments should be of much assistance.

2. This Report covers the last year that Mr. Jones had charge of the Gardens, and I cannot let the opportunity pass without recording an appreciation of the work he has done during his 33 years service in the island, and it is to be regretted that his last year should have experienced the outbreak of withertip which has had such a serious effect on the agriculture of the island. It is my misfortune that I have not had an opportunity to make the personal acquaintance of Mr. Jones before his retirement.

I have, &c.,

(Sgd.) H. M. LEAKE,

Commissioner of Agriculture
for the West Indies.



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STAFF OF THE AGRICULTURAL DEPARTMENT, DOMINICA.

JOSEPH JONES	Agricultural Superintendent and Curator of the Botanic Gardens and the Experiment Station.
J. W. WRIGHT	Assistant Curator.
J. C. BRUNEY	Agricultural Instructor.
F. J. BAPTISTE	Foreman.
W. G. HUTTON	Clerk.
A. JOSEPH	Overseer.

REPORT ON THE AGRICULTURAL DEPARTMENT

DOMINICA.

FOR THE YEAR ENDED MARCH 31, 1925.

Work in the Gardens and Observations on Plants.

The weather throughout the year was generally fine; although the rainfall was higher than that of the previous six years. Watering operations had again to be carried out on a large scale and it is by these means that many of the fine and valuable specimens were kept alive during this trying period.

The strict need for economy still prevails and has again prevented the carrying out of several much desired improvements.

An event of some interest in the plant life of the gardens, was the simultaneous flowering of five specimens of the Talipot Palm, *Corypha umbraculifera*. The large terminal inflorescences were objects of interest to visitors. As this is one of the palms which visiting botanists wish to see in its early and middle stages of growth, as well as at maturity, it is desirable to plant out a specimen or two at intervals of five or six years in order to form plants illustrating the various stages of its life history.

The first Talipot Palm to reach maturity in Dominica was planted by Dr. Imray in the Public Gardens, Roseau. It flowered and fruited about a quarter of a century ago. Experience has shown that in the Public Gardens, and in the Botanic Gardens, with an annual rainfall of 73 inches this species flowers when about 25 to 28 years of age. At the St. Aroment Estate with an annual rainfall of 105 inches, two magnificent Talipots were nearly forty years of age before reaching maturity. It will be seen that in Dominica comparatively dry conditions bring about early flowering, while a higher rainfall and increased humidity tend to prolong the flowering period, and to delay the final act of seed production. As would be expected this palm assumes its grandest proportions under the latter conditions.

Irrespective of the Talipots in flower, this species is still represented in the gardens by five palms in various stages of growth.

WORK IN THE NURSERIES AND DISTRIBUTIONS OF PLANTS.

During 1923, as was mentioned in last year's report, bud-wood of a number of varieties of sour citrus was imported and budded successfully on the sour orange stock; and a considerable number of the budded plants were distributed to various localities during the year for experimental purposes. The varieties distributed and their number is as follows :—

Tahiti	46
Sour lime	115
Bears's seedless	74
Woglum lemon	23
Limequat	15
Rangpur lime	12

In addition to these a new plot was formed at Morne Bruce.

The above mentioned plants have not been distributed to any person or locality, but only to owners of estates situated in the wetter districts and where withertip has put a stop to the cultivation of the ordinary Dominica lime. It is hoped that those planters who have been favoured with the new kinds of Sour Citrus will afford them good conditions and keep them under close observation, as it is important that reliable data on the rate of growth and degree of power of resistance to withertip under conditions of high humidity should be in the possession of the Agricultural Department as early as possible.

PLANT DISTRIBUTION.

It will be noticed that there has been an increase in plant distribution over that of the previous year; but this is largely accounted for by the increased demand for coffee plants.

The distribution of common seedling limes is again much lower and it is quite possible that none of this type of lime will be available next year, as all available ground is being planted with sour orange stocks.

The number of plants sent our during the year is as follows :—

Limes	1,680
Budded Washington Naval Orange	195
,, Grapefruits	30
,, Lemons	53
,, Portugal Orange	5
,, Tangerine	15
Sour citrus	285
Grafted Mangoes	218
Cacao	100
Coffee	4,460
Cashew	310
Vanilla	1,570
Nutmegs	32
Camphor	5
Mangosteen	23
Tonka Beans	61
Coconuts	869
Miscellaneous	332
Total	10,252

The following supply of miscellaneous seeds, seedlings and cuttings were also distributed :

Vegetable seeds	1,467 packets
Sugar cane cuttings	12,450
Uba ,, ,, ...	4,150
Shade tree cuttings	12,750
Elephant grass cuttings	2,300
Lemon grass plants	4,000
Black pepper cuttings	100

PLANT IMPORTATIONS.

The three plants of the Chaulmoogra tree, *Taraktogenos Kurzii*, raised from seed presented by Kew Gardens in December, 1920, continue to do well. As it is probable that these trees will produce fruits when about seven or eight years old, the period at which seeds may be expected is not very far off.

The seedlings of *Taraktogenos Kurzii*, *Hydnocarpus anthelminthica*, and *Hydnocarpus castanea*, presented by the United States Department of Agriculture in November 1922, and of *Oncoba echinata*, received from the same Department in April, 1923, are all growing remarkably well. It will be seen that the class of plants, the seeds of which yield Chaulmoogra oil, now definitely stated to be a cure for leprosy, is fairly well represented in the Gardens.

Two lots of seeds of *Hydnocarpus alpinus* were received from the Commissioner of Agriculture, but unfortunately no germination results were obtained in either case.

Other interesting plants presented by the United States Department of Agriculture were the Yerba Mate or Paraguay Tea, *ilex paraguariensis*, the Sweet Herb of Paraguay, *Stevia rebaudiana*, the leaves of which are stated to be many times sweeter than sugar, and the Marang, *Artocarpus odoratissimus*. The last named is native to the Phillipine Islands, and it should prove an interesting addition to the collection of fruit trees already established in the Gardens. It is, of course related to the Breadfruit, the Bread Nut, and the Jack fruit, all of which are well known in Dominica. The Department of Agriculture in the Phillipines regard the Marang as being a fruit of unusual promise.

In previous reports mention was made of the introduction of the Suwarri Nut of British Guiana, *Caryocar nuciferum*, and the Queensland nut, *Macadamia tenuifolia*. Both of these striking trees grow well and fruit early under Dominica conditions, and each kind should be represented in every fruit orchard in the island. Both trees yield nuts of excellent flavour, and if produced locally on some scale, would be much sought after. Another nut bearing tree of high quality introduced by the Department and now approaching the fruiting stage, is *Lecythis Zabucajo*, the Paradise Nut. The Department has nine healthy specimens of this tree, that is, one at the Botanic Gardens, and eight at Morne Bruce. Many efforts, extending over a number of years, to establish the Brazil Nut, *Bertholletia excelsa*, in the Gardens, have failed.

In connexion with the importation of exotic fruit trees, it is desirable to record one of the results arising from the introduction of the Mangosteen, *Garcinia Mangostana*, many years ago. During the past season sufficient fruits of the mangosteen were received from Mr. Justice Pemberton of Pointe

Mulatre to allow of the raising of over 1,000 vigorous seedlings of this interesting tree. These, together with the plants raised during the previous year, bring the number of mangosteen plants in the nurseries at present to over 1,200, practically all of which will be available for distribution during the planting season of 1925.

NOTES ON ECONOMIC PLANTS.

Camphor :—The plot of fifteen trees, which, as stated in last year's report were planted in 1915, fruited again this year. A quantity of seed was collected and sown in boxes and a hundred seedlings were raised.

A report on the camphor which was prepared by the Government Chemist at the Federal Laboratory and sent to the British Empire Exhibition will be found at another page.

Oil Palms :—Since the year 1922 a number of plants of the West African oil palm (*Elaeis guiniensis*) have been distributed to a few selected districts for trial.

It is pleasing to note that five of the plants which were planted on one of the interior estates at an elevation of 1,700 feet and with an annual rainfall of from 180-200 inches, have commenced to throw out flower spikes. The plants are about five feet in height, are very healthy and are evidently suited to their surroundings.

During the year under review, a number of seeds of *Elaeis quiniensis, var. communis, forma dura,* were presented to the Department by The Imperial Commissioner of Agriculture, Trinidad, who obtained the seeds through the Royal Botanic Gardens, Kew.

THE LIME INDUSTRY.

During the year under review, the export figures show a marked increase on those of the previous year. This, however, does not mean that the difference between the two lots of figures is due to an increase in the crop through a decrease in the ravages of withertip, but rather to the large carry over from the previous year, but taking it on the whole the crop for the year has been a fairly satisfactory one considering the damage which has been done by the withertip disease.

Taking the five years (1918-22) prior to the appearance of withertip, the average annual crop was 400,000 barrels of limes. The crop shipped since 1919 is calculated in barrels of fruit and expressed in round numbers is recorded below :—

1919	....	....	402,000
1920	....	....	369,000
1921	....	....	516,000
1922	....	....	400,000
1923	....	....	228,000
1924	....	....	424,000

Taking the average as a basis the loss inflicted by withertip amounts, roughly, to 74,000 barrels of limes in each of the years since 1922, or a little more. Allowance must, however, be made for natural development and increasing output of the industry.

The following table, calculated on the usual basis shows the disposal of the crop under the various heads:—

Product.	Barrels of fruit.	Approximate percentage of total crop.
Concentrated juice	356,053	83.97
Raw juice	46,443	10.95
Fresh limes	19,231	4.54
Citrate of lime	931	.22
Citrate acid crystals	Nil.	Nil.

Comparison with the figures of last year's disposal of crop show the following changes. The proportion shipped as concentrated juice rose from 52.1 to 83.79 per cent, and that shipped as raw juice fell from 25 to 10.95 per cent. Fresh limes represented 4.54 per cent of the crop shipped. Citrate of lime showed a heavier drop than on the previous year, falling from 9 4 to .22 per cent.

There was a slight increase in the export of pickled limes, the number of barrels shipped being 293, an increase of 113 on the previous year.

There was a marked increase in the export of lime juice cordial, which rose from 2,477 gallons the previous year, to 21,944 gallons during the period under review.

Weather conditions were generally favourable throughout the year, but bad torrential rains in August and October were responsible for considerable damage and loss of fruit on some of the lime estates and peasant lands; those situated in and round about the Roseau Valley being the chief sufferers.

The export of products of the lime industry during 1924 is given below:—

Product.	Quantity.	Value. £
Concentrated Lime Juice ...	237,369 gallons.	78,245
Raw ,, ,, ...	348,324 ,,	20,319
Lime Juice Cordial	21,944 ,,	2,482
Fresh Limes	19,231 barrels.	21,129
Citrate of Lime	7,789 lb.	245
Citric Acid Crystals	Nil.	Nil.
Essential Oil of Limes (Distilled)...	37,244 lb.	8,563
Otto of Limes (Hand pressed or Ecuelled) ...	11,795 lb.	4,558
Pickled Limes	293 barrels.	486
		£136,027

MINOR INDUSTRIES.

Coconuts :- During 1924 little further has been done with this product except in the Lasoye District, where the area under coconuts is gradually increasing, and copra dryers have been erected at several places.

Tobacco : - Some sixty acres were planted during the year and quite good results have met the efforts of those who took advantage of the advice given by the Agricultural Department. The services of Mr. Brooks, a tobacco expert, have again been obtained to cure the crop, and he will proceed to Dominica as soon as he is required.

Ginger : - Encouraging results have been obtained by a number of persons in the cultivation of this crop. Unfortunately, planting material was difficult to obtain and persons already in possession of it will probably hold the majority of the crop over for planting next season. Curing experiments were carried out on one of the Windward Estates, the results being very satisfactory. A sample of the cured ginger was sent to the Imperial Institute for examination, the report on which will be found at another page.

The success which the people concerned have met with, has resulted in great activity among a large number of persons, and there is no reason why Dominica should not export an excellent quality of ginger, either cured or uncured.

Coffee :—A large number of seedlings of *Coffea robusta* were raised during the year. These met with a ready sale, and there is every prospect that the demand for these will increase.

Bananas : —The situation with regard to these, remains the same as last year.

Nutmegs :—There has been little demand for these during the year, but the Agricultural Department have raised a large stock of seedlings and every effort is being made to push the cultivation of this tree in the island.

Vanilla :—Interest in this crop is still increasing, but the Department has been unable to supply the large quantities of cuttings which were asked for. This is not surprising when one considers that during the last few years so many thousands of cuttings have been distributed locally.

BRITISH EMPIRE EXHIBITION.

At the request of the Permanent Exhibition Committee, a number of samples of Dominica products were forwarded by Mr. Lauchlan Rose (Jun.) to the Imperial Institute for examination.

The various reports are contained in the following pages and will be of value to all those who are interested.

A valuable report will also be found on Dominica timbers and for this we are indebted to the Cambridge University School of Forestry who received specimens of the timbers at the close of the 1924 Exhibition.

REPORT ON CAMPHOR FROM DOMINICA.

The sample of camphor which is the subject of this report was forwarded to the Imperial Institute by the Hon. Commissioner, West Indian & Atlantic Group Committee, British Empire Exhibition (1924) and is referred to in his letter of the 10th September, 1924.

Description.

The sample, which was labelled "*Cinnamomum Camphora*, exhibited by Botanic Gardens," weighed ½ lb. and consisted of small transparent granular crystals of very pale cream colour and fairly good aroma.

Results of Examination.

The camphor was found to have the following constants, which are shown in comparison with those of a commercial sample of pharmaceutical camphor and also with the British Pharmacopeia requirements:

	Present sample.	Commercial Pharmaceutical Camphor.	British Pharmacopeia Requirements.
Specific Gravity at 15.5°/15.5°C. ...	0.9954	--	about 0.995
Melting Point	175°C.	179 C.	,, 175°C.
*Optical Rotation ...	+10.4°	+10.8°	,, +10
†Solubility (at 15.5°C.) in Chloroform ..	0.34	0.34	0.25
Alcohol, 90% (by weight) ...	1.25	1.2	1.
Olive Oil	4.0	4.0	4.
Water	750	750	about 700

*Determined at 15.5°C in a 10 cm. tube of solution in 90% alcohol containing 25 grams of camphor per 100 c.c. of solution.

†Number of c.c. of solvent per gram of camphor.

The solution of the Dominica camphor in water was opalescent and had an oily appearance at the surface, whilst that of the commercial sample used for comparison was quite clear. Its solutions in organic solvents were yellowish and slightly turbid owing to the presence of a small amount of extraneous matter.

When triturated with chloral hydrate, menthol, phenol and thymol, both the Dominica sample and the commercial sample formed liquids, as specified in the British Pharmacopeia.

Remarks.

As already mentioned, the present sample was slightly discoloured and contained a small amount of oily impurities which rendered its solution in water slightly turbid; moreover its aroma was not as good as that of the commercial sample of pharmaceutical camphor with which it was compared, but otherwise its properties agreed very well with those of the latter.

Such camphor would find a market for industrial purposes but would have to be refined by sublimation, either locally or in the United Kingdom, in order to enable it to conform with the standard of purity required by the British Pharmacopeia. The current price of British refined camphor in the United Kingdom is 3/8 to 3/9 per lb. and that of the industrial product from 2/6 to 2/8 per lb.

REPORT ON GINGER FROM DOMINICA.

The sample of ginger which is the subject of this report was forwarded for examination to the Imperial Institute by the Hon. Commissioner, West Indian and Atlantic Group Committee, British Empire Exhibition, (1924) and is referred to in his letter of the 10th September, 1924.

Description.

The sample was labelled *Zingiber officinalis* (skinned, washed and bleached.) Exhibition by Estates of W. J. Alcock, Esq. It consisted of hands of peeled, washed and bleached ginger, up to 3½ inches in length. The hands were plump, striated, had a short fracture, and were externally of pale pinkish-buff colour ; internally they were pale yellowish-cream. The aroma and pungency were good.

Result of Examination.

The ginger was examined with the following results, which are shown in comparison with the usual range of figures for commercial ginger, and with those specified in the British Pharmacopœia for ginger used for medicinal purposes.

	Present Sample.	Commercial Ginger.	British Pharmacopœia Requirements.
	per cent.	per cent.	per cent.
Matter soluble in cold 90 per cent alcohol	5.1	3-6	Not less than 5.0
Matter soluble in water ...	10.1	about 10	Not less than 8.5
Total ash	4.8	3 6	Not more than 6.0
Ash soluble in water	1.4		Not more than 1.5

It will be seen from the above table that the analytical figures for the present sample fall within the usual limits for commercial ginger, and also agree with those specified by the British Pharmacopœia. The ginger used for medicinal purposes must however be unbleached, but the demand for this is comparatively small.

Commercial Value.

The sample was described by commercial experts as "medium" ginger worth 135/- to 140/- per cwt., spot, in London, with first grade Jamaica ginger at 160/- per cwt. (January, 1925.) The firm mentioned that current prices were high on account of the decrease in the supply at the end of the season, and that ginger of the same quality as the present sample was being sold for future delivery at 115/- to 120/- per cwt.

Remarks.

This Dominica ginger is well prepared and of good attractive appearance, and supplies of a similar quality would be readily saleable in the United Kingdom. It has been bleached rather more than necessary ; first grade Jamaica ginger is slightly darker than the present sample.

28th February, 1925.

IMPERIAL INSTITUTE

OF THE

UNITED KINGDOM, THE COLONIES AND INDIA.

REPORT ON COPRA FROM DOMINICA.

The samples of Copra which are the subject of this report were forwarded to the Imperial Institute, for examination, by the Hon. Commissioner, West Indian & Atlantic Group Committee, and are referred to in his letter of the 28th May, 1925.

Description.

No. 1. "Copra from the Alcock Estates," Weight 5 lb.
Copra of very attractive appearance, in sound condition, the inner surface being very white and clean.

No. 2. "Copra from Captain Ashpitel, Melville Hall." Weight 5¼ lb.
Copra in clean sound condition, and of good appearance though not so attractive as sample No. 1, the inner surface being cream to light yellowish-brown.

Results of Examination.

The samples were chemically examined with the following results :—

	No. 1.	*No. 2.*
Moisture, per cent	5.3	5.3
Oil, in copra as received, per cent	65.9	66.8
Oil, calculated on the moisture-free copra, per cent	69.6	70.8
Acid value of oil	0.3	0.9
Free fatty acids (expressed as lauric acid), per cent	0.1	0.3

The oils, as extracted by light petroleum, were of normal character.

These results show that both samples contain the usual amount of oil and that the acidity of the extracted oils was satisfactorily low. The percentages of moisture are however rather high, the maximum desirable being under 3 per cent.

Commercial Value.

Copra of the quality of these samples would be readily saleable in the United Kingdom at current market prices. The daily spot prices as fixed by the Committee of the London Copra Association have recently varied from £28. 5. to £31. 10s. per ton, according to the grade and country of origin; West Indian "f.m.s." being quoted at £30. 5. per ton in London on July 1st, 1925.

Remarks.

These two samples of copra are of good quality, containing normal amounts of oil of low acidity.

In the case of consignments shipped to the United Kingdom the moisture should be reduced, by further drying, in order to bring it below 3 per cent. The advantages of the lower percentages of moisture are (1) that there is less likelihood of fungi developing on the copra during storage and transit and so increasing the acidity of the oil, and (2) that such copra is preferred by British buyers, as being more easily worked than a product containing more moisture.

IMPERIAL INSTITUTE,
DATE 6TH JANUARY, 1925.

RESULTS OF THE EXAMINATION OF SULPHUR FROM DOMINICA.

Imp. Inst.
No. 3991/24.

Reference.	Letter dated 10th Sept. 1924 from the Hon. Commissioner, West Indian & Atlantic Group Committee, British Empire Exhibition.
No. & quantity.	Sulphur from Soufriere Estate, Dominica.
1. Mineralogical.	The sample consisted of crystalline sulphur.
2. Chemical.	The sulphur was analysed with the following results : –

	per cent.
Sulphur	99.01
Moisture (at 100.C.)	0.23
Ash	0.69

No bituminous material was present.

Commercial valuation and Remarks.

This sulphur, if regarded as a crude product, is of high quality and is comparable with certain sulphurs obtained by the Frasch process in Texas and Louisiana, which often have a purity of about 99.5 per cent. The chief impurity in these American sulphurs is a small quantity of oil, commonly amounting to about 0.1 per cent, but the present sample from Dominica is free from bituminous and oily impurities.

Sulphur of this quality should realize about the same price as the Texas material, i.e. about £5. 10s. per ton in the United Kingdom. (January, 1925.)

IMPERIAL INSTITUTE,
LONDON, S.W. 7.

REPORT ON VANILLA FROM DOMINICA.

The sample of vanilla which is the subject of this report was forwarded for examination to the Imperial Institute by the Hon. Commissioner, West Indian & Atlantic Group Committee, British Empire Exhibition (1924), and is referred to in his letter of the 10th September, 1924.

DESCRIPTION.

The sample, which weighed 9 ozs., was described as *Vanilla planifolia*, exhibited by Canefield Estate. It consisted of Typical vanilla pods 8 inches long and ⅜ inche wide, of dark chocolate brown colour and good appearance. The pods have not the fine aroma of Bourbon vanilla, and a slightly sour odour was noticeable.

RESULT OF EXAMINATION.

On chemical examination the pods were found to contain 1.9 per cent of vanilla. Bourbon pods which are the best commercial variety, usually contain from 1.9 to 2.9 per cent of vanilla.

COMMERCIAL VALUE.

Importers in London to whom the pods were submitted regarded them as inferior to the Bourbon variety, and considered that they would not realise much over 40s. per lb., in the United Kingdom with Bourbon pods of the same length at 48s. per lb.

REMARKS.

The pods are of good length and appearance, but are inferior to Bourbon vanilla in aroma and would consequently realise a lower price.

8th April, 1925.

CHIEF EXPORTS.

TABLE OF AGRICULTURAL EXPORTS FOR THE TRIENNIAL PERIOD 1922 TO 1924.

	1922.	1923.	1924.
Lime Products:			
Concentrated Juice ...	162,222 galls.	79,272 galls.	237,369 galls.
Raw Juice	286,782 ,,	428,895 ,,	348,324 ,,
Lime Juice Cordial ...	4,226 ,,	2,477 ,,	21,944 ,,
Distilled Lime Oil ...	76,150 lbs.	43,482 lbs.	37,244 lbs.
Ecuelled Oil of Limes ...	21,267 ,,	13,762 ,,	11,795 ,,
Citrate of Lime	722,400 ,,	181,629 ,,	7,789 ,,
Green Limes	24,389 brls.	20,748 brls.	19,231 brls.
Pickled Limes	444 ,,	180 ,,	293 ,,
Citric Acid	38,864 lbs.	51,833 lbs.	—
Cacao Products:			
Cacao	640,304 lbs.	634,908 lbs.	782,281 lbs.
Prepared Cacao	341 ,,	454 ,,	1,052 ,,
Coconut Products:			
Coconuts	214,289	206,138	154,049
Copra	4,990 lbs.	42,561 lbs.	46,173 lbs.
Coffee Products:			
Coffee	4,531 lbs.	359 lbs.	748 lbs.
Sugar Products:			
Rum	265 galls.	—	145 galls.
Syrup	£43 worth	—	112 ,,
Spices:			
Vanilla	1,569 lbs.	668 lbs.	2,168 lbs.
Nutmegs	—	—	2,938 ,,
Ginger	2,600 lbs.	3,760 ,,	1,000 ,,
Honey Products:			
Honey	227 lbs.	4,225 lbs.	4,738 lbs.
Bees Wax	—	166 ,,	45 ,,
Various Products:			
Bananas	3,381 bunches	1,592 bunches	8,390 bunches
Oranges	1,564 brls.	1,013 brls.	1,433 brls.
Mangoes	7,880 crates	3,782 crates	7,968 crates
Grape Fruits	326 ,,	381 ,,	327 ,,
Pears	1,091 ,,	1,076 ,,	1,351 ,,
Miscellaneous Fruits ...	—	£50 worth	£48 worth
Bay Oil	3,143 lbs.	9,132 lbs.	7,406 lbs.
Orange Oil...	1,867 ,,	1,522 ,,	1,319 ,,
Kola Nuts	£10 worth	£10 worth	£ 5 worth
Cassia Fistula	£50 ,,	2,644 lbs.	582 lbs.
Tamarinds	56 brls.	16 brls.	117 brls.
Vegetables	—	—	£87 worth
Farine	—	784 lbs.	3,060 lbs.
Hides and Skines	42 lbs.	528 ,,	847 (No.)
Leather unmanufactured.	—	666 ,,	547 lbs.
Plants, bulbs and seeds ...	—	£10 worth	£18 worth
Fruits, Jam and Jellies	539 lbs.	389 lbs.	210 lbs.
Hats	£15 worth	—	—
Turtle shells	—	338 ,,	413 ,,
Baskets	—	£18 worth	£28 worth
Forest Products:			
Hardwood	71,219 feet	36,990 feet	100,357 feet
Firewood	239 tons	560 cords	631 cords
Canoe shells	34	10	27
Hoops	—	—	50 bundles
Shingles	58,350	10,400	41,125
Charcoal	5,307 lbs.	5,474 lbs.	16,734 lbs.
Ships and boats	—	£40 worth	—
Total values	£150,243	£113,971	£171,257

WORK CONNECTED WITH INSECT AND FUNGUS PESTS AND THEIR CONTROL.

The banana plot situated at the Morne is being converted into a citrus experiment plot. The bananas are being gradually cut out and the new varieties of sour citrus are being planted in their places as they become ready.

At the present time the following varieties are already planted : - Tahiti, Bear's Seedless, Sour Lime, Kusaie, Rangpur Lime, Citrus Mitis, (Calamondin lime) Eustis Limequat and the Woglum lemon.

All the varieties are doing well, and should supply a considerable quantity of budwood later on.

A considerable quantity of various stocks are already in the nurseries and as soon as the opportunity occurs these will be budded with the above mentioned varieties.

Seeds of Kusaie lime are being obtained as quickly as possible by the Agricultural Department and at the present time 100 seedlings have been raised and are thriving. These will be ready for distribution to selected districts about June.

Unfortunately, seed can only be obtained in small quantities as the fruit of the Kusaie contains very few seeds. Apart from that, the necessity of fumigation always destroys the vitality of a certain percentage.

12 plants of this variety were imported from Honolulu for scientific purposes. These plants have been very carefully fumigated and sprayed, and are now at the Botanic Gardens where they will remain under observation for some time.

Most of the varieties were treated with withertip material but as none of the plants had as then flowered it was only possible to treat the foliage.

Although none of the varieties tested showed signs of infestation, too much must not be taken for granted as the climatic conditions were not very favourable for the tests. The experiments are still going on and careful watch is being kept on all the plants.

Sour Lime. The habit of this plant so far leaves much to be desired as at the present time they show no signs of developing a bushy habit.

There are also other varieties which are new to Dominica in the nurseries and it is hoped that they will be immune to the withertip fungus.

These plants should flower shortly and if the fruit sets it is also hoped that the test for acidity will justify their cultivation in Dominica.

Information has come to hand from the Bath and Sherwood Estates that the Woglum Lemon has been attacked by a fungus which, if not identical with, presents a similar appearance on the young leaves ; but it is too soon to come to any definite conclusion as the plants were only planted out during the year under review and before any reliable information can be obtained about them they must be allowed to attain their full vigour which was checked when they were transferred from the nurseries to the fields.

PLANT LEGISLATION IN DOMINICA.

The first step in the direction of plant protection was taken in 1898 when Act No. 3 was passed to provide against the importation of articles likely to introduce diseases among plants. Under the authority of this Act, a Proclamation dated August 27, 1898, prohibited the importation from Ceylon of plants, seeds, berries, earth and soil. This Act was suspended by Law No. 9 of 1904, in which provision is made for the fumigation and disinfection of imported plants, cuttings, buds, grafts, bulbs, roots and seeds, and their packages : also their fruit and vegetables intended for propagation, and not for consumption as food.

Under Law No. 6 of 1907 power is conferred to prohibit by proclamation the importation of plants, cuttings, bulbs, roots, seeds, or berries, or any earth or soil, or any articles packed therein, or any packages, or other articles or things likely to be the means of introducing any plant disease.

A Proclamation dated February 5, 1909, under No. 6 of 1907, prohibits the importation into Dominica of all plants from Dutch Guiana, which are likely to be a means of introducing disease from that country.

A Proclamation dated October 26, 1910, prohibits the importation of banana plants and suckers from all countries of Central or South America, and from the island of Trinidad, also of coco-nuts in husk, and all growing plants or parts of plants of coco-nuts, from Cuba, Jamaica, Trinidad, and all countries of Central and South America.

A Proclamation dated October 9, 1916, restricts under certain conditions, the entry of rooted plants of all kinds from the United States of America, Cuba, Jamaica, Haiti, San Domingo, and Porto Rico.

A Proclamation dated October 26, 1917, prohibits the importation of seed-cotton or cotton seed from all countries or places outside the Colony of the Leeward Islands, save and except from some other Presidency of the Colony, or from the Colony of Trinidad and Tobago, and its dependencies, or from the Colonies of Grenada, St. Vincent, and St. Lucia, provided, however, that small quantities of cotton seed for experimental purposes may be imported into the Presidency of Dominica, on the written permission of the Superintendent of Agriculture on such terms and conditions as he may prescribe.

A Proclamation dated December 21, 1920, prohibits the importation of sugar cane from any other country into this Presidency, for the time being.

A Proclamation dated February 21, 1921, prohibits the importation of Johnson Grass from any other country into this Presidency. (*Holcus halepensis.*)

A Proclamation dated January 28, 1923, prohibits the importation of Banana plants, (suckers), from all countries except other Leeward Islands, Grenada, St. Vincent, and Barbados.

A Proclamation dated February, 20, 1923, prohibits the importation of citrus plants from all countries except the Windward and Leeward Islands, Trinidad and Tobago, and Barbados. It is, however, allowed that the Curator or agricultural officer shall have the power to import for scientific purposes anything thus prohibited, on his making a report of such importation for the information of the Governor.

A Proclamation dated December 24, 1923, prohibits the importation of coco-nuts and coco-nut plants from any other country into this Presidency, until further orders.

With regard to the export of plants, it is only necessary to state that such cannot be admitted into the United States unless accompanied by a certificate showing that they have been inspected by a duly authorized official, and found free from injurious plant diseases or insect pests.

REPORT ON THE LIME EXPERIMENT STATION, DOMINICA.

This Station was started in April, 1913, and the first planting of limes was in July of the same year. A statement showing the expenditure and the receipts during the twelve year period is given below :—

	Expenditure.			Receipts.		
	£	s.	d.	£	s.	d.
1913–14	50	0	0	17	9	7
1914–15	70	0	0	61	1	5
1915–16	120	0	0	86	9	10
1916–17	175	0	0	121	2	11
1917–18	175	0	0	180	12	2
1918–19	200	0	0	233	12	8
1919–20	250	0	0	625	6	7
1920–21	320	0	0	741	8	2
1921–22	400	0	0	456	8	3
1922–23	350	0	0	423	1	2
1923–24	350	0	0	515	3	5
1924–25	332	10	8	662	3	9½
Cost of manures to date..	325	0	0			
Cost of drinage (from Special Service Grant)..	48	3	0			
Head Labourer's house...	60	0	0			
Shed for housing mill, etc., ...	100	0	0			
	£3,325	13	8	£4,123	19	11½

Supervision, always a considerable charge, has cost nothing in this instance, the work being done by the agricultural officers. A fair amount of assistance has also been given by the two or three agricultural pupils who have been under training during recent years. These were from time to time engaged in sowing green dressings, applying manures, pruning trees and other work of a light character.

It should be clearly understood that the figures of expenditure given above not only maintain the present bearing area of limes, which includes the gathering and transport of the crop to the Bath Estate, but also covers the cost of upkeep of about five acres of young lime cultivation, eight acres of young coconuts, and a further area of three acres consisting of plots of grapefruits, camphor, avocado pears etc.

During the twelve years of its existence the Experiment Station, so far as the disposal of the crop is concerned, has been in the position of a small grower, that is, the ripe and green limes have had to be sold in the open market at the current ruling prices. For the purpose of record, a table has been prepared which shows the local market rates per barrel of fruit since 1914–15 :—

RIPE LIMES.

Year.	Barrels of fruit.	Amount received.	Rate per barrel.
		£ s. d.	£ s. d.
1914-15	222	61 1 5	5 6
1915-16	315	86 9 10	5 6
1916-17	541	121 1 1	4 5½
1917-18	649	180 12 2	5 6¾
1918-19	1,070	221 2 8	4 1½
1919-20	1,589	498 1 6	6 5½
1920-21	2,571	688 17 4	5 4¼
1921-22	2,485	456 8 3	3 8
1922-23	2,916	423 1 2	2 10¾
1923-24	2,502	453 15 5	3 7½
1924-25	2,684	629 11 9½	4 3¾

GREEN LIMES.

Year.	Barrels of fruit.	Amount received.	Rate per barrel.
		£ s. d.	£ s. d.
1918-19	10	12 10 0	1 5 0
1919-20	191	127 5 1	13 3¾
1920-21	55½	52 10 10	18 11
1921-22	—	—	—
1922-23	—	—	—
1923-24	66	61 8 0	18 7
1924-25	40	32 12 0	16 3½

The crop was 2,684 barrels of ripe limes and 40 barrels of green limes, all of which were sold in the local market and realised the sum of £662. 3. 9½. In addition to this 24 barrels of green limes were shipped to the The British Empire Exhibition, Wembley, for distribution from the Dominica stand. The total crop for the year was 2,748 barrels of fruit.

MANURIAL EXPERIMENTS WITH LIMES.

The main manurial experiments now carried on consist of five plots three times repeated, two series with young limes, and one series with old limes. They are as follows: –

A. Complete manure of nitrogen, phosphates and potash.
B. Control. No manure.
C. Mulch of grass, 5 tons per acre.
D. Nitrogen and phosphates.
E. Nitrogen and potash.

In each case the nitrogen was originally applied in the form of Swift's manure 8 per cent ammonia at the rate of 4 cwt. per acre, but for a period of three years this manure could not be obtained, and the equivalent in the form of Cotton seed meal was applied instead. During the past three years dried blood, 14 per cent ammonia has been used.

The mulch applied is mainly in the form of lemon grass, supplemented by leaves and young shoots of *Gliricidia maculata*. Both forms of mulch are especially grown on what would otherwise be waste grounds in the vicinity of the plots. This system of utilising odd corners, steep hill-sides, and the banks of streams for growing material for application to cultivated areas is strongly recommended in Dominica.

The phosphatic requirements of the plots are furnished in the form of basic slag, applied at the rate of 4 cwt. per acre, and the potash, by sulphate of potash at the rate of 1½ cwt. per acre. During 1920–21 neither of these manures could be obtained, and the falling away of the crop during 1921–22 is in some measure due to the lack of these fertilizers. During recent years sulphate of potash was again available, and as basic slag could not be got, 16 per cent acid phosphate was used in its place.

The yields of these plots in barrels of fruit, during the period 1917–18 and 1924–25 are given below :—

Eight Years' Results of Manurial Experiments with Limes.

Original Series.

Trees planted July, 1913.

Year.	Size of plots.	A. Complete manure.		B. Control.		C. Mulch.		D. Nitrogen and Phosphates.		E. Nitrogen and Potash.	
		per plot.	per acre.	per plot.	per acre.	per plot.	per acre.	per plot.	per acre.	per plot.	per acre.
1917–18	¼-acre	15¾	63	14	56	23¾	95	23¾	95	7¾	31
1918–19	,,	60	240	45¾	183	71¾	287	58½	234	34¾	139
1919–20	,,	85	340	89½	358	99½	398	88½	354	60½	242
*1920–21	,,	118¾	475	109¼	437	130½	522	117½	470	112	448
1921–22	,,	95	380	85¾	343	99	396	85¾	343	86	344
1922–23	,,	88	352	68½	274	95½	382	81½	326	90½	362
†1923–24	,,	56¼	225	47¼	189	69¾	279	56½	226	63	252
1924–25	,,	51	204	38	152	53¼	213	37	148	48¾	195

* No Phosphates or Potash applied that year.
† First complete year under "withertip" conditions.

MANURIAL EXPERIMENTS WITH LIMES.

DUPLICATE SERIES.
Trees planted July, 1913.

Year.	Size of plots.	A. Complete manure.		B. Control.		C. Mulch.		D. Nitrogen and Phosphates.		E. Nitrogen and Potash.	
		per plot.	per acre.	per plot.	per acre.	per plot.	per acre.	per plot.	per acre.	per plot.	per acre.
1917-18	¼-acre	6¾	27	10¼	41	18	72	6¾	27	10¾	43
1918-19	,,	34¾	139	22½	90	42¼	169	30	120	38½	154
1919-20	,,	57¾	231	38	152	69¾	279	60½	242	72½	290
*1920-21	,,	117	468	81½	326	115½	462	105¾	423	115¾	463
1921-22	,,	79	316	52¼	209	85½	342	81	324	94	376
1922-23	,,	77	308	45	180	80	320	82	328	97	388
†1923-24	,,	55¼	221	35¾	143	60½	242	54	216	70½	282
1924 25	,,	47	188	29¼	117	46	184	40½	162	56½	226

TRIPLICATE SERIES.
Old Trees planted 1893.

Year.	Size of plots.	A. Complete manure.		B. Control.		C. Mulch.		D. Nitrogen and Phosphates.		E. Nitrogen and Potash.	
		per plot.	per acre.	per plot.	per acre.	per plot.	per acre.	per plot.	per acre.	per plot.	per acre.
1917-18	¼-acre	45	180	29¾	119	25½	102	27½	110	22¾	91
1918-19	,,	70	280	32½	130	23	92	52½	210	34½	138
1919 20	,,	89¾	359	48½	194	32	128	67¼	269	50	200
*1920-21	,,	85¼	341	52½	210	43¾	175	97	388	64¾	259
1921-22	,,	74	296	42½	170	40	160	79	316	73¾	295
1922-23	,,	69	276	34	136	37	148	86	344	70	280
†1923-24	,,	54½	218	26½	106	45¼	181	61¼	245	56¼	225
1925-25	,,	35¼	141	21	84	35	140	48½	194	43	182

While a period of eight years is hardly sufficient to allow of definite conclusions being reached in the case of manurial experiments with orchard cultivation, this view need not prevent consideration of the yields of the plots collectively. The ten plots of young limes, which cover an area of 2½ acres, were planted in July 1913, and are therefore, at the end of March 1925, eleven years and nine months old from the time of being placed out in the field. The crop returns during this period are as follows:—

1917-18	5th year	...	137½	barrels or	55	barrels per acre.
1918-19	6th ,,	...	438¾	,, ,,	175	,, ,, ,,
1919-20	7th ,,	...	721½	,, ,,	288	,, ,, ,,
1920-21	8th ,,	...	1,124	,, ,,	450	,, ,, ,,
1921-22	9th ,,	...	844½	,, ,,	338	,, ,, ,,
1922-23	10th ,,	...	805	,, ,,	322	,, ,, ,,
1923-24	11th ,,	...	568¾	,, ,,	227	,, ,, ,,
1924 25	12th ,,	...	447¼	,, ,,	179	,, ,, ,,

* No Phosphates or Potash applied that year.

† First complete year under "withertip" conditions.

These results are especially remarkable in view of the fact that only ½ acre of the 2½ acres receives a complete concentrated manure, and whilst one in this area receives an incomplete manure and ½ acre an application of mulch—a complete, but slow acting manure—the remaining ½ acre receives no manurial treatment at all.

A better idea of the effects of the various manures and cultural measures carried on, may be gained from the table below, in which the plots, each receiving identical treatment in the three series of experiments, are grouped together. This table shows at a glance the actual yield per three plots of a kind grouped together, the calculated yield per acre, and the increase or decrease per acre per annum compared with the previous year.

3 COMPLETE MANURE PLOTS. (¼ ACRE EACH.)

Year.	Area.	Yield in Barrels Per ¾ Acre.	Calculated yield in barrels per acre.	Increase or decrease per Acre compared with previous year.
1917-18	¾ Acre.	67½	90	+
1918-19	,,	164¾	219⅔	+129⅔
1919-20	,,	232½	310	+ 90⅓
*1920-21	,,	321	428	+118
1921-22	,,	248	330⅔	− 97½
1922-23	,,	234	312	− 18⅔
†1923-24	,,	166½	222	− 90
1924-25	,,	133⅓	177⅓	− 44⅔
		1,567½	= Total yield for 8 yrs.	

3 CONTROL PLOTS. (¼ ACRE EACH.)

Year.	Area.	Yield in Barrels Per ¾ Acre.	Calculated yield in barrels per Acre.	Increase or decrease per Acre compared with previous year.
1917-18	¼ Acre.	54	72	
1918-19	,,	100¾	134⅓	+ 62⅓
1919-20	,,	176	234⅔	+100⅓
*1920-21	,,	243¼	324⅓	+ 89⅔
1921-22	,,	180¼	240⅓	− 84
1922-23	,,	147	196	− 44⅓
†1923-24	,,	109½	146	− 50
1924-25	,,	88½	118	− 28
		1,099¼	= Total yield for 8 yrs.	

* No Phosphates or Potash applied that year.

† First complete year under "withertip" conditions.

RESULTS OF MANURIAL EXPERIMENTS WITH LIMES.

3 MULCH PLOTS. (¼ ACRE EACH.)

Year.	Area.	Yield in Barrels Per ¾ Acre.	Calculated yield in Barrels per acre.	Increase or decrease per Acre compared with previous year.
1917-18	¼ Acre.	67¼	89⅔	
1918-19	,,	138	184	+ 94⅓
1919-20	,,	201¼	268⅓	+ 84⅓
*1920-21	,,	289¾	386	+117⅔
†1921-22	,,	224½	299⅓	— 86⅔
1922-23	,,	212	282⅔	— 16⅔
†1923-24	,,	175¾	234⅓	— 48⅓
1924-25	,,	135	180	— 54
		1,343½	= Total yield for 8 years.	

3 NITROGEN AND PHOSPHATES PLOTS. (¼ ACRE EACH.)

Year.	Area.	Yield in Barrels Per ¾ Acre.	Calculated yield in Barrels per Acre.	Increase or decrease per Acre compared with previous year.
1917-18	¾ Acre.	64¾	86⅓	
1918-19	,,	141	188	+101⅔
1919-20	,,	216¼	288⅓	+100⅓
*1920-21	,,	320¼	427	+138⅔
1921 22	,,	240½	320⅔	—106⅓
1922-23	,,	250	333⅓	+ 12⅔
†1923-24	,,	171¾	299	--104⅓
1924-25	,,	126	168	— 61
		1,530½	= Total yield for 8 years.	

3 NITROGEN AND POTASH PLOTS. (¼ ACRE EACH.)

Year.	Area.	Yield in Barrels Per ¾ Acre.	Calculated yield in Barrels per Acre.	Increase or decrease per Acre compared with previous year.
1917-18	¾ Acre.	41¼	55	
1918-19	,,	107¾	134⅔	+ 88⅔
1919-20	,,	183	244	+100⅓
*1920-21	,,	292½	390	+146
1921-22	,,	253¾	338⅓	— 51⅔
1922-23	,,	257	342⅔	+ 3⅔
†1923-24	,,	190	253¼	— 89½
1924-25	,,	148	197	— 56
		1,473¼	= Total yield for 8 years.	

* No Phosphates or Potash applied that year.

† First year under "withertip" conditions.

The small falling off in yields during the period under review was entirely due to the presence of the Withertip disease of limes which was first noticed in the Experiment Station in July, 1922.

The above records are, however, valuable as showing what could be done under average conditions on estates during the first twelve years of working, and prior to the advent of withertip, if the cultural and manurial requirements of the trees are attended to. Had the whole area of 2½ acres received a complete concentrated manure, the returns would have been bigger than those shown in the table.

Judging by Dominica standards, all the plots, including those receiving no manure have done well. In the latter instance the influence of good cultural measures, apart from the application of manures must be evident to all who study the table of crop returns.

The mulched plots, although not giving the highest return, are of special interest to lime growers. As is well known this material is without the forcing effect of concentrated fertilizers, but it is cumulative in its effect. It is practically certain that the standard of health of the lime tree is higher in the mulched than in any of the plots receiving concentrated manures only. This material which is so abundant in the island, should be the chief manure used by cultivators.

Owing to the fluctuating prices, it is not possible to state with any accuracy the cost of applying a complete manure per acre, but if we assume the amount in the vicinity of £6, we find by taking the average value of a barrel or limes at 5/- that an increase in the crop per acre of about 24 barrels is sufficient to cover the cost of the application. It will be seen from the results of the experiments shown in the table above that the application of a complete concentrated manure has not only paid, but yielded a considerable profit in addition.

Other Manurial Experiment Plots.

Both seedling and spineless limes budded on sour orange stocks, and ordinary seedlings, have been under experiment since 1914, and occupy one acre of land.

The acre is divided up into ¼ acre plots : two plots of common limes budded on sour orange stocks : one plot of spineless limes on the same kind of stocks : and one plot of ordinary seedling limes for comparison.

During 1917-18 and 1918-19 the trees in each plot have received a small dressing of organic nitrogen at the rate of 4 cwt. per acre. During the first three years of their existence, No. 1 budded plot (see table below), was grown with tephrosia as a green dressing, whilst No. 2 budded plot was grown in the usual way with weeds and grass, which was occasionally weeded. The spineless had green dressings of horse beans, and the seedling limes were clean weeded. Early in 1919-20 each plot received a complete manure of nitrogen, phosphates and potash. It is intended to maintain this series as complete manure plots. The crop yields off the four plots since fruiting commenced are as follows :—

RESULTS OF MANURIAL EXPERIMENTS WITH LIMES.

COMMON LIMES BUDDED ON SOUR ORANGE STOCKS. (PLOT 2.)

Year.	Size of plot.	Actual yield in barrels per plot.	Calculated yield in barrels per acre.
1917-18	¼ acre.	6	24
1918-19	,,	13¾	55
1919-20	,,	31¼	125
*1920-21	,,	86	344
1921-22	,,	73¾	295
1922-23	,,	121	484
†1923-24	,,	65¼	261
1924-25	,,	67¼	269

COMMON SEEDLING LIMES.

Year.	Size of plot.	Actual yield in barrels per plot.	Calculated yield in barrels per acre.
1917-18	¼ acre.	Nil.	Nil.
1918-19	,,	16¾	67
1919-20	,,	22¾	91
*1920-21	,,	61	244
1921-22	,,	58	232
1922-23	,,	64½	258
†1923-24	,,	55¾	223
1924-25	,,	50½	201

The returns from the four plots (or 1 acre), since bearing commenced are as follows :—

1917-18	4th year	...	20½ barrels of limes.
1918-19	5th ,,	...	83½ ,, ,, ,,
1919-20	6th ,,	...	127¾ ,, ,, ,,
1920-21	7th ,,	...	291½ ,, ,, ,,
1921-22	8th ,,	...	269 ,, ,, ,,
1922-23	9th ,,	...	379½ ,, ,, ,,
*1923-24	10th ,,	...	206 ,, ,, ,,
1924-25	11th ,,	...	200¾ ,, ,, ,,

In this particular experiment the budded plants have again done better than the seedling limes, but whether the lead will be maintained is a matter which future work will be able to determine.

* No Phosphates or Potash applied that year.

† First complete year under "withertip" conditions.

EIGHT YEARS' RESULTS OF EXPERIMENTS CONDUCTED WITH SPINELESS AND COMMON LIMES, BUDDED ON SOUR ORANGE STOCKS, AND WITH COMMON SEEDLING LIMES.

PLANTED JULY 1914.

SPINELESS LIMES BUDDED ON SOUR ORANGE STOCKS.

Year.	Size of plot.	Actual yield in barrels per plot.	Calculated yield in barrels per acre.
1917-18	¼ acre.	6½	26
1918-19	,,	18¼	73
1919-20	,,	34	136
*1920-21	,,	46	184
1921-22	,,	45½	182
1922-23	,,	62	248
†1923-24	,,	26	104
1924-25	,,	24⅔	98⅔

COMMON LIMES BUDDED ON SOUR ORANGE STOCKS. (PLOT 1.)

Year.	Size of plot.	Actual yield in barrels per plot.	Calculated yield in barrels per acre.
1917-18	¼ acre.	8	32
1918-19	,,	34¾	139
1919-20	,,	39¾	159
*1920-21	,,	98½	394
1921-22	,,	91¾	367
1922-23	,,	132	528
†1923-24	,,	59	236
1924-25	,,	59⅔	238⅔

RECENTLY STARTED MANURIAL EXPERIMENT PLOTS.

Three new series, each consisting of three plots, were started early in 1921. The treatment given in the first series is repeated three times. The plots are numbered 16 to 24.

The treatment is as follows:—

SERIES. I.

Plot 16. Ready mixed complete fertilizer, (8 per cent, nitrogen 10 per cent phosphates and 4 per cent potash), at the rate of 500 lb. per acre (with mulch—2½ tons per acre.)

Plot 17. Control. (No fertilizer or mulch.)

Plot 18. Ready mixed complete fertilizer, (8 per cent nitrogen, 10 per cent phosphates, 4 per cent potash) at the rate of 1,000 lb. per acre (with mulch—2½ tons per acre.)

The addition of nine plots brings the number of experiment plots now being conducted at the Station, up to thirty. The twenty-one plots running before the new experiments were started involved no less that 1,809 separate measurements and records, an average of eighty-six pickings per plot. With

* No Phosphates or Potash applied that year.

† First complete year under "withertip" conditions.

the addition of three new series this work connected with measuring and recording will be greatly increased involving as it will close on 2,600 measurement each year.

The following tables show the returns for the four years since the commencement of the experiments :—

SERIES I.

Year.	A. (16) Complete Manure. (500 lb. Mixed Fertiliser per acre.)		B. (17) Control. (No Manure.)		C. (18) Complete Manure. (1,000 lb. Mixed Fertiliser per acre.)	
Yield in Barrels.	per plot.	per acre.	per plot.	per acre.	per plot.	per acre.
1921-22	17	60½	10	30	20	68
1922-23	46	164	28¼	85	65½	225½
1923-24	50	197½	36½	110½	64¾	223
1924-25	55½	199	46¾	141½	66¼	228

SERIES II.

Year.	D. (19) Complete Manure. (500 lb. Mixed Fertilizer per acre.)		E. (20) Control. (No Manure.)		F. (21) Complete Manure. (1,000 lb. Mixed Fertilizer per acre.)	
Yield in Barrels.	per plot.	per acre.	per plot.	per acre.	per plot.	per acre.
1921-22	6½	23	8¾	22	3½	10½
1922-23	18¼	65	31¼	80	42¼	128
1923-24	32	114	54	138½	62¾	190
1924-25	51½	184	57¾	148	66	200

SERIES III.

Year.	G. (22) Complete Manure. (500 lb. Mixed Fertiliser per acre.)		H. (23) Control. (No Manure.)		I. (24) Complete Manure. (1,000 lb. Mixed Fertilizer per acre.)	
Yield in Barrels.	per plot.	per acre.	per plot.	per acre.	per plot.	per acre.
*1921-22	36½	101½	31	91	45¾	147½
1922-23	23½	65	21¾	64	22¾	73
1923-24	22¾	63	20¾	61	22¾	73
1924-25	29¼	81	20½	60	25	80½

* Higher returns due to some seedling limes which had not been removed from amongst the budded plants.

The areas of all the above plots are slightly over a ¼ of an acre each, therefore the calculated barrels per acre have been given to the nearest fraction.

It will be noticed, that Series I & II compare very favourably with each other, and come up to expectations, but the returns from Series III are very disappointing, in fact the return from these plots are in some cases 50% lower than those from Series I & II. Even Plot 24 which received manure at the rate of 1,000 lbs. per acre is 50% lower than those of the control plots 17 and 20.

The only reason which can be put forward at the present time is that owing to the situation of these plots a considerable amount of fruit is being stolen.

WITHERTIP IN THE EXPERIMENT STATION.

During the months of June and July an exceptionally heavy flowering of the lime trees occurred and it was hoped that, considering the favourable situation of the experiment station, there would be a great increase in the crop.

Early in July, it was noticed that a number of flowers at the North Eastern end of the station had become affected and in the course of a few days the whole of the cultivation, which a few days before had been one mass of white, changed to a mass of brown burnt up flowers and grave doubts were entertained that the crop would be an utter failure.

The total crop returns for the year, however, show that there was an increase on that of the previous year. It will, however, be noticed that the plot returns are lower than those of 1923-24, but not so marked as in those other years since the advent of withertip in the station.

The increase in the total crop is due to new cultivations which are now coming into bearing.

It is of course understood that the last few years have been exceptionally dry ones and it remains to be seen what will really happen should an exceptionally wet year or two be experienced.

The production of fruit on the inner branches of the trees was again noticed and reports from various estates have been received to the same effect, therefore the matter is entitled to some consideration.

NEW CULTIVATION.

During the year an interesting addition has been made in the experiment station.

A plot of avocado pears has been established. This should arouse much local interest, as nowhere else in the island is there any other such cultivation. It is therefore hoped that the lead will be taken up by others as there is always a ready sale for first class fruit and up to the present the demand for such has exceeded the supply.

The plot is roughly one acre in extent. No special preparation of the land was given. The place had previously been cleared of bush and scrub. The holes were dug and left for two weeks before the seed was sown. After sowing, horse beans were planted round about and as the young plants came up a plentiful supply of mulch was always kept round them.

DETAILS OF ADMINISTRATION.

EXPENDITURE.

The votes for the Agricultural Department for the year were as follows:—

	£.	S.	D.
Salaries Curator, Assistant Curator, Foreman, Clerk and Watchman	885	0	0
Contingencies	10	0	0
Travelling Expenses...	50	0	0
Maintenance	280	0	0
Cultivation of Saleable Products	275	0	0
Fumigation of Imported plants	5	0	0
Maintenance Public Gardens	15	0	0
Purchase of Special Manures	120	0	0
Printing Reports	40	0	0
Experiment Station	400	0	0
Purchase of Vegetable Seeds	25	0	0
Trial shipments of fruit	20	0	0
Chemicals and Apparatus	25	0	0
Telephone Rental	15	0	0
Uniform for Watchman	3	0	0
Agricultural Instruction	127	0	0
	£2,295	0	0

The actual expenditure during the year under the above heads was £2,145. 15. 2.

ADDITIONAL EXPENDITURE FOR SPECIAL SERVICES.

Travelling Agricultural Instructor	£131	5	0
Withertip Disease Control of	278	13	10
Expenses Tobacco Expert	20	3	6
	£430	2	4

RECEIPTS.

The receipts under the various heads were as follows:—

	£.	S.	D.
Limes	662	3	9½
Cacao	159	11	3
Fruits	60	15	2
Plants	58	8	7
Vegetable Seeds	16	19	11
Nutmegs	11	8	0
Castor Seed	0	8	9
Coconuts	5	15	2
Onion Seed	7	7	5
Tobacco Seed	4	5	3
Miscellaneous	4	16	9
	£992	0	0½

STAFF CHANGES, CORRESPONDENCE, OFFICIAL VISITS.

STAFF CHANGES.

Mr. J. W. Wright, late of the Royal Botanic Gardens, Kew, was appointed by the Secretary of State for the Colonies to be Assistant Curator, Dominica. He arrived in the island on May 7th and took up his duties on May 8th.

Mr. J. C. Bruney was appointed as a temporary Travelling Agricultural Instructor, and commenced his duties on July 1.

ADDITIONS AND REPAIRS.

During the year a new house with the following dimensions 10′ x 18′ x 8′ was put up in the experiment station to accommodate an additional watchman.

CORRESPONDENCE AND DISTRIBUTION OF INFORMATION.

During the year 664 communications were despatched from the Office of the Department and 194 minute papers dealt with.

Of literature dealing with withertip disease of limes, one hundred and fifty copies of a report by Mr. F. Stell, Mycologist on the staff of the Agricultural Department, Trinidad, and one hundred and fifty-eight copies of a report by Mr. S. P. Wiltshire of the Bureau of Mycology, London, were printed and distributed locally to planters and others interested.

There were also distributed 163 copies of a paper entitled "Minor Industries in the Leeward Islands" by Hon. A.E. Collens, F.I.C., F.C.S., and F.H.S. Warneford, M.A., B.Sc., A.I.C., F.C.S., 91 copies of a leaflet on the "Preparation of Commercial Papain for the market," and 200 pamphlets (reprint) on "Cane syrup and Fancy Molasses."

A considerable number of planters and others desiring information on agricultural matters called at the Gardens during the year.

PLANT AND SEED EXCHANGE, FOREIGN AND LOCAL.

Contributions of seeds and plants were received from the following :— Botanic Gardens, Ceylon ; Agricultural Adviser, Porto Rico ; Botanic Gardens, Montserrat ; Royal Botanic Gardens, Kew ; U. S. A. Department of Agriculture ; Imperial Commissioner of Agriculture, Trinidad ; Agricultural Departments of Grenada and Hawaii ; Botanic Gardens, Trinidad ; and Mr. Justice Pemberton.

Seeds and plants were sent to : Royal Botanic Gardens Kew ; Agricultural Adviser, Porto Rico ; U. S. A. Department of Agriculture ; Agricultural Department, Barbados ; Botanic Gardens, Antigua ; Experiment Station, Montserrat ; and the Agricultural Departments of Grenada, St. Lucia, and St. Vincent.

OFFICIAL AND OTHER VISITS TO THE GARDENS.

Hon. A. E. Collens, F.I.C., F.C.S., Government Chemist and Superintendent of Agriculture, arrived in Dominica on May 3rd and sailed for Antigua on May 9th.

Mr. Collens paid a second visit to the island on May 19th and returned on June 6th. He again arrived in Dominica on November 24th and sailed for Antigua on November 26th.

Professor H. A. Ballou, Entomologist on the staff of the Imperial College of Agriculture, arrived in Dominica on May 7th and left on May 9th. Professor Ballou again visited the Gardens on May 19th.

Mr. F. G. Harcourt, F.R.H S., Agricultural Superintendent, Antigua, visited the Gardens on August 29th.

REPORT ON TIMBERS OF DOMINICA.

Sir Francis Watts, K.C.M.G., the Special Commissioner appointed by the Secretary of State for the Colonies, to look into and report on the Agricultural situation and prospects of Dominica, paid two visits to the island, the first one from 30th November to 16th December, the second visit from 11th February to 9th March.

Other visitors during the year were Mr. J. R. Bovell, I.S.O., Director of Agriculture, Barbados, and Mr. O. W. Barrett, Agricultural Adviser to the Government of Porto Rico.

METEOROLOGICAL RETURNS.

Temperatures and other Meteorological observations, a summary of which is given in table at another page, were recorded during the year.

RAINFALL.

The rainfall at the Botanic Gardens for 1924 amounted to 79.16 or 24.76 inches more than the previous year, and 2.17 more than the average annual precipitation for the last thirty-two years, which is 75.99.

CAMBRIDGE UNIVERSITY SCHOOL OF FORESTRY.

REPORT ON TIMBERS OF DOMINICA.

Among the Timbers of Dominica there are several which deserve a high place as ornamental timbers on account of their natural beauty and the capability which they possess of taking a fine finish, while not being unusually difficult to work or exceptionally heavy. The following species may be included in this category :—

1. *COURBARIL* (*Hymenaea Courbaril*), a wood already known on the English market under the name of *locust*. It is of a pleasing warm reddish brown colour, striped with narrow dark bands, comparatively straight in the grain, and resembles the courbaril or locust wood of Trinidad, rather than that of British Guiana, which is lighter in weight and colour although more easily worked. It is suitable for furniture and inside fittings, and it is claimed that this wood is never attacked by dry rot or worms. (Family : *Leguminosae :* Sub-family : *Caesalpinioideae.*)

2. *BOIS DE ROSE*, Cyp, or Cypre, (*Cordia gerascanthoides*), a wood the name of which is somewhat misleading, since it bears little if any resemblance to the rosewoods, which are known in the European markets, from India and Brazil. It is nevertheless a valuable timber of a colour rather resembling Walnut, but lacking the dusky bands of European walnut and the purplish tone of the American or black walnut. It is straight in the grain, of moderate weight, and capable of being worked readily. When polished Dark Bands which are obscure before being treated become distinctly prominent. It stands the weather well. (Family : *Borraginaceae :* Subfamily : *Cordioideae.*)

3. *RED CEDAR* (*Cedrela odorata*), resembles the cigar box cedar of Mexico in every feature except odour, which in the Dominican is absent as far as our specimens are concerned. This timber is so well known as the mahogany substitute and as a cigar-box wood that there is no need to say more. (Family : *Meliaceae :* Sub-family : *Cedreloideae.*)

4. *GREY CEDAR* (*Tabebuia pentaphylla,*) a timber from a species belonging to the Family *Bignoniaceae*, and is entirely different in appearance from the red cedar. It is distinctly greyish brown in colour, with very fine dark lines marking the surface. When worked it emits a faint oily scent. It is only moderately straight in the grain, and there is a tendency for the surface to pull up and tear out in working. Our specimen is much lighter in colour on the tangential surface than on the radial, and there is a rather pleasing zigzag figure on the former surface. It is capable of a fine finish, and being of a moderate weight is suitable for a furniture wood.

5. *ACOMAT ST. CHRISTOPHE* (*Sideroxylon mastichodendron*), is a hard, close-grained, light coloured, heavy wood, so heavy in fact that it sinks in water. It is very durable and should be useful as a substitute for box-wood, in addition to being a valuable cabinet wood. (Family : *Sapotaceae :* Sub-family : *Sideroxylinae.*)

6. *YELLOW SANDERS*, or Noyeau, (said to be *Terminalia capitata*, but differing very much in structure from any *Terminalia* sp. we know, and probably *Fagara flava*, since it resembles the *Fagara* of South Africa), is a fine even-grained, yellow wood, rather hard and heavy which works very well. It is a useful cabinet wood which takes a good finish.

7. *SAVONETTE* (*Lonchocarpus violaceus*), is a heavy medium-grained wood of an attractive golden-brown colour, with a pronounced figure on the tangential section. The grain runs in two directions making the wood difficult to plane and finish with a clean surface, as there is a strong tendency for the grain to pull up in broad lines. When carefully finished, however, it is a distinctly beautiful wood. (Family : *Leguminosae.*)

8. *ANGELIN* (*Andira inermis*), is a coarse grained wood of a reddish-brown colour, rather heavy, hard, and durable and suitable for all kinds of heavy constructional work. It is often spoken of as "partridge wood," although this name is applied to the wood of other species also. (Family : *Leguminosae :* Sub-family : *Papilionatae.*)

9. *MORICYPRE* (*Byrsonima spicata.*) This timber is an even grained wood of moderate weight, rather resembling mahogany, but somewhat greyer in colour, and no less pleasing. It is suitable for furniture. (Family : *Malpighiaceae.*)

10. *BOIS RIVIERE* (*Chimarrhis cymosa*) is rather remarkable on account of its unusual yellow colour. It has a medium grain which alternates in direction, and therefore is liable to tear up in planing. Otherwise it is an attractive species. (Family : *Rubiaceae.*)

11. *GALBA OR CALABA* (*Calophyllum calaba*) exported from the West Indies under the name of *santa maria*, is a reddish brown wood but unlike mahogany in colour. It is fairly hard and rather heavy, easy to work, and suitable for furniture, constructional work, and probably shipwright's work. It is obtainable in large sizes. (Family : *Guttiferae ;* Sub-family : *Calophylloideae.*)

12. *BOIS PISTOLET* (*Guarea Perrottetiana*) is another mahogany like wood, although somewhat different in shade and heavier than true mahogany. It is a good furniture wood, though somewhat heavier and slightly darker in colour than the African species of this genus. It is more suitable for framing than for panelling. (Family : *Meliaceae.*)

13. *CACOENIER* (*Ormosia dasycarpa*) is a timber which varies conderably in colour and general appearance, between Angelin and satin wood. It is coarse in grain, rather heavy, hard, and at its best might be used as a furniture wood. (Family : *Leguminosae* ; Sub-family : *Sophoreae.*)

14. *PETIT CITRON* (*Ilex cuneifolia*) is an ornamental wood with a very pronounced and abundant silver grain, and a close texture. It is moderately heavy, and rather darker in colour than European holly. Family : *Aquifoliaceae.*)

15. *LAURIER MARBRE* which we have no means of identifying as far as species is concerned, but which from structure alone can almost certainly be said to be a species belonging to the *Lauraceae*, is a very good timber of a nut brown colour with darker bands as indicated by the term "marbre." It is of medium weight and hardness, and of medium grain, inclined, but in spite of this, easy to work and finish. It polishes well and is undoubtedly a good furniture wood.

16. *LAURIER ROSE* is a light coloured wood, rather light in weight, and a medium hardness. It is rather coarse in grain, and inclined to be a little woolly, but works well with sharp tools, and emits a pleasant odour faintly recalling eglantine and oil of lemon. It finishes with a striped effect distantly resembling satin-wood, and would resemble mahogany very closely if coloured with mahogany stain. It would make a good furniture wood.

17. *LAURIER POIVRE* is a coarser grained wood than the two preceding species, of medium weight and hardness, and of a hoary mahogany colour, not uniform but branded in appearance owing to the inclination of the grain in different directions, in alternating bands of tissue. It works easily, but requires careful filling before polishing.

18. *LAURIER* also is rather coarser in the grain than Nos. 15 and 16, and is of a pale golden brown colour, resembling No. 15 with respect to weight and hardness. It works moderately well, but shows a tendency to pull up in places when being planed. Like No. 17 it requires considerable care in filling the grain before polishing if a finish suitable for cabinet work is desired.

19. *OLIVIER* (*Terminalia buceras*) is a timber of a pale yellowish colour with a little figure on the plank face. It is light in weight and rather below the average in hardness, and the plank face works well, although the grain on the quarter tends to pull up in planing. It would be useful for the cheaper grade of furniture. (Family : *Combretaceae.*)

20. *GOMMIER* (*Dacryodes haxandre*) is a light brownish wood which, owing to the grain running obliquely in different directions in alternating bands, has an appearance similar to satin-wood, as a substitute for which it might readily be used. It is moderately hard and heavy, and inclined to tear rather badly in planing, but is capable of a fine finish with care, and polishes well. (Family : *Burseraceae.*)

21. *SEASIDE GRAPE* (*Coccoloba uvifera*) is a close grained wood of an attractive colour resembling good Spanish mahogany, but richer and redder. It is hard and heavy and capable of a fine finish, but is somewhat cross grained and only obtainable in comparatively small sizes. (Family : *Polygonaceae.*)

22. *BOIS BANDE* (*Chione glabre*) is another close grained timber, lighter in weight than the last, but less attractive in colour, being of a hoary brown tint. It is of medium hardness and works well. On polishing, dark bands, which are comparatively obscure before, become more prominent and serve to make the wood more attractive. (Family : *Rubiaceae.*)

23. *BOIS D'ORME* (*Guazuma ulmifolia*) is a light buff coloured timber of medium weight and hardness, straight in the grain and easy to work, except on the quarter, on which there is some tendency to pull up. It has a pleasing fine silver grain which is, however, not sufficiently prominent to warrant special quarter cutting to obtain it. A useful wood for cheap furniture. (Family : *Sterculiaceae.*)

24. *MANGUE BLANC* (*Moronobea coccinea*) is a timber of a yellowish brown colour, closer in the grain and heavier and harder than the last. It works fairly well and takes a fine polish, but is apt to shake if not carefully seasoned. It might be useful as a second-rate cabinet wood. (Family : *Guttiferae.*)

25. *MAHOE COCHON* (*Sterculia caribaea*) is a coarse grained timber from a species belonging to the same family as No. 23. It is of a reddish buff colour, streaky, and unattractive on the plank face, but possessing a well marked silver grain on the quarter cut. It is obtainable in large sizes, and splits readily, and is used for shingles on this account. It is a useful wood for general purposes.

26. *SEPTANS* is a timber of medium weight and hardness and a warm golden brown to reddish brown colour. There is a pleasing and prominent silver grain on the quarter cut, and the wood works well, and being capable of a fine polish is suitable for the better classes of cabinet work.

There are several very hard and heavy timbers which are worth noting. Among them :—

27. *BOIS D'INDE, PIMENTO, OR JAMAICA PEPPER* (*Pimenta acris*) is somewhat like rosewood in colour, and apart from a useful constructional timber is a well known walking stick. It is too heavy for a furniture wood, although fine in grain and of an attractive colour. (Family : *Myrtaceae.*)

28. *RESINIER GRANDE FEUILLE* (*Coccoloba latifolia*) is a very beautiful wood of a surprisingly rich colour very difficult to describe. The grain is inclined and tears up a little, but with care is capable of a fine finish and takes a high polish. Its weight is the chief drawback. (Family : *Polygonaceae.*)

29. *BALATA* (*Bumelia retusa*) is another very heavy timber which is a rich red-brown in colour and very close in grain, but shakes rather seriously. It is fissible and useful for constructional work where hardness and durability are desirable. (Family : *Sapotaceae.*)

30. *BOIS D'ABRE* is a very heavy timber of a greyish brown colour, and a very crossed grain, which is rather fine. It is very hard and not easy to work, but with trouble can be finished with a good surface which takes a fine polish. It tends to shake in seasoning, unless care is taken to prevent too rapid drying. Should be a good timber for heavy constructional work.

31. *MANGUE ROUGE* (*Tovomita Plumieri*) has possibilities as a high class walking stick wood, and is used for posts and piles. There is a well marked silver grain on the quarter cut. (Family : *Guttiferae.*)

32. *BOIS DE FER*, has a rich golden brown colour, and a texture somewhat resembling boxwood. It is very hard and heavy, and well deserves its name. In working there is a tendency for the grain to tear out, making it difficult to finish, but it is capable of taking a very high polish.

33. *CARAPATE* is a very hard and heavy wood of a greyish purple colour, which is medium in coarseness of grain, the grain being filled in many places with a white deposit as in teak and some mahoganies. The grain is much crossed and in consequence tears out badly unless subjected to very careful treatment in planing.

34. *ACOUQUOI JAUNE* a timber rather resembling No. 32 in colour, but somewhat paler. It is hard and moderately heavy and has a fine close grain. It ought to turn well and might make a suitable substitute for boxwood in the manufacture of turned tool handles, etc.

35. *BOIS LEZARD* (*Vitex divaricata*) is a rather cross grained wood which resembles common elm in colour, though closer in grain. A useful wood for all ordinary purposes.

36. *ADEGON* (*Ardisia sp.*) is a heavy, hard, close grained wood, of an unattractive variable, greyish brown or yellow colour. It works without tearing, but is somewhat fissible, and develops shakes if subjected to variable temperatures. (Family : *Myrsinaceae.*)

37. *EPINEUX* is a timber of medium weight and hardness, and a somewhat yellow colour. It is rather fine in grain and the grain is crossed, making it liable to tear in working. It is a useful wood, but in no wise of outstanding merit.

33. *PIPIRI* has something of the appearance of white mahogany. It is even grained and works well, and would be an excellent wood for sides and bottoms of drawers, and for cupboards and other interior fittings.

39. *BOIS JAUNE* is a timber of medium weight and hardness, pale yellow in colour and having a medium coarse, inclined grain, which causes some difficulty in working. Apart from its greater weight, it resembles a coarse specimen of a canary wood.

40. *ACAJOU BLANC*, in spite of its name bears little resemblance to a mahogany. It is nearly white in colour and has nothing to recommend it for any except the most ordinary uses.

41. *BREADFRUIT* (*Artocarpus incisa*) is a light and very coarse wood, woolly in texture, and uneven in grain. It is suitable for packing cases, etc., where a cheap wood is required.

RAINFALL AT THE BOTANIC STATION, DOMINICA, 1898–1924.

Month.	1898.	1899.	1900.	1901.	1902.	1903.	1904.	1905.	1906.	1907.	1908.	1909.	1910.	1911.	1912.	1913.	1914.	1915.	1916.	1917.	1918.	1919.	1920.	1921.	1922.	1923.	1924.	Mean monthly rainfall.
Jan.	3·00	6·78	2·25	4·52	2·01	3·10	7·92	3·86	3·74	4·48	1·56	2·30	5·20	11·46	8·21	7·48	3·22	1·76	10·79	5·00	6·02	2·42	7·54	6·82	6·50	3·82	6·25	5·13
Feb.	2·11	3·00	1·15	0·88	0·43	5.01	5·58	2·56	2·04	3·82	1·16	5·02	11·42	4·00	1·32	2·32	5·56	1·04	1·90	4·10	8·73	1·52	4·76	1·02	4·30	2·30	1·90	3·34
March	1·53	1·32	3·56	3·27	2·69	2·44	2·16	4·38	0·90	1·96	3·68	2·08	1·16	3·11	4·60	7·29	2·23	0.84	4·52	6·74	3·32	0·69	3·80	4·46	2 80	3·46	0·66	3·07
April	0·75	0·60	1·29	0·25	2·80	0·57	1·61	1·90	3·18	2·66	3·08	8·12	2·86	5·00	3·38	1·57	6·45	15·75	1·22	0·47	1·86	2·36	·22	3·06	2·26	3·77	1·46	2·84
May	1·19	1·76	7·62	2·05	6·86	2·11	1·58	4·32	3·78	1·61	2·24	1·92	7·30	11·16	1·56	3·46	2·58	3·65	2·05	2·94	5·90	4·60	2·38	1·54	2·64	0.13	3·18	4·06
June	11·78	7·23	5·59	12·18	12·89	9·02	6·00	5·54	9·46	5·54	6·16	9·00	14·26	6.54	5·44	3·49	7·27	9·17	4·82	15·34	6·04	3·88	3·48	1·96	7·14	4·18	4·42	7·49
July	11·75	10·08	10·50	22·96	9·74	8·91	10·38	6·10	10·10	8·00	9·22	9·86	12·60	8·08	5·83	7·57	11·83	14·84	8·23	13·70	11·28	12·64	12·08	11·18	6·08	8·20	13·64	10·66
Aug.	16·35	6·32	7·34	13·53	7·41	18·41	7·69	14·18	7·30	7·40	9·41	13·12	10·22	11·43	4·88	10·93	3·98	14·74	16·58	8·53	8·46	9·64	8·76	9·30	9·26	11·44	11·28	10·03
Sept.	7·89	7·04	5·28	5·86	8·62	9·69	11·32	8·92	10·88	11·60	7·52	6·44	8·90	15·34	3·32	8·39	7·71	11·36	6·20	15·02	4·14	7·06	8·60	6·28	10·68	4·28	4·88	8·47
Oct.	7·97	1·81	6·60	4·84	5·75	12·73	10·21	9·10	8·12	7·80	5·12	13·10	3·82	7·06	7·26	10·40	5·13	8·41	10·06	2·46	6·67	7·50	12·60	9·41	2·68	9·84	10·98	7·95
Nov.	6·55	5·02	3·49	6·43	11·20	4·17	3·13	5·48	9·58	5·98	1·96	4·36	5·40	6·91	11·20	4·28	9·44	10·05	14·28	1·92	3·36	9·02	4·62	2·44	3·00	1·06	6·86	6·46
Dec.	5·86	2·19	3.68	4·32	7·16	14·23	4·81	5·72	2·94	8·42	7·80	5·82	7·50	7·14	6·66	2·72	9·70	8·40	3·77	4·58	5·86	6·70	5·62	4·22	6·90	1·92	13·65	6·45
Total	79·73	53·15	58·35	81·09	77.56	90·72	72·45	72·03	72·02	69·30	58·91	81·44	90·64	97·26	63·72	69·90	75·10	100·01	83·42	80·80	71·46	68·03	74·46	61·72	64·24	54 40	79·16	

SUMMARY OF METEOROLOGICAL REGISTER KEPT AT BOTANIC GARDENS, DOMINICA.

1924. Months.	Thermometer. Dry. 9 a.m.	Dry. 3 p.m.	Wet. 9 a.m.	Wet. 3 p.m.	Relative Humidity. 9 a.m.	Relative Humidity. 3 p.m.	Thermometer. Max'm.	Thermometer. Min'm.	Barometer Corrected. *Reduced to 32° Fh. and Sea Level.* 9 a.m.	Barometer Corrected. 3 p.m.	Rainfall.	Barometer Corrected. Highest.	Barometer Corrected. Lowest.	Thermometers. Highest. Max.	Thermometers. Lowest. Min.	Remarks.
January ...	76·5	79·0	71 7	73·3	76·6	72·9	85·7	67·6	30·11	30·04	6·25	30·17	29 94	89	64	
February ..	77·6	81·4	71·1	71 8	70 8	58·4	88·8	67·9	30·10	30·04	1·90	30·20	29·96	93	63	
March ...	81·4	84·1	72·5	72·9	60·7	56·0	93·3	68·0	30·06	29·99	0·66	30·15	29·90	96	65	
April ...	82·7	84·7	73·4	73.9	60 9	55·8	92·3	69·1	30·05	29·98	1·46	30·10	29·92	96·5	66·5	
May ...	80·7	85·2	74·4	74·4	58·(	55·5	93·1	71·5	29·98	29·91	3·18	30·09	29·85	97·5	70	Sharp shock of earthquake at 4.55 a.m. on 18th May and also at 1.0 a.m. on 29th May.
June ...	83·0	84·2	75·4	75 4	65·8	62·5	91·2	71·2	29.98	29·94	4·42	30 03	29·89	95	69	
July ...	81·1	83·7	75·7	76·1	74·7	66·7	89.0	72·8	29·98	29·94	13·64	30·10	29·89	92	70	
August ..	81 3	83·8	76·2	76·6	76·1	68·1	88.1	72·7	29·94	29·90	11·28	30·01	29·81	93	70	Heavy squalls experienced on the 18th and on the night of the 28th instant.
September	82·3	83·4	76·3	76·7	72·0	69·5	89·9	72·3	29·95	29.89	4·88	30·04	29·83	93·5	71	
October ...	81·4	83·4	76·7	76·8	76·1	69·6	90·8	72·6	29·93	29.86	10·98	30·01	29·79	94	70	Heavy showers on Oct. 6th causing great damage in and near to Roseau.
November	81·0	82 0	76·0	75·5	76·2	70·3	90·3	71·5	29·92	29·84	6·86	29 97	29·79	94	68	
December .	77 2	79·1	72·4	72·3	77·1	67·9	86·8	68·6	30·01	29·93	13·65	30·06	29·86	90	65	
	80·5	82·8	74·3	74·6	70·4	64·4	89·9	70·5	30·00	29·94	79·16					

Highest Maximum Temperature = 97·5 on 13th May. Lowest Minimum Temperature = 63 on 9th and 11th February.
Highest Barometer (Corrected) = 30·19 on 20th Feb. Lowest Barometer (Corrected) = 29·79 on 16th Oct. and 10th November.
Greatest Rainfall in 24 hours = 5·60 inches on 6th October.

RAINFALL RETURNS, DOMINICA, 1924.

Station.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	TOTALS.
Bagatelle, Soufrière	3.93	2 74	1.14	2.17	4.87	5.47	12.00	8 43	4.80	6.78	7.80	8.97	69.10
Batalie ...	4.06	0.60	0.43	0.44	0.51	2.99	11.42	10.10	3.43	5.50	5.28	7.30	52 06
Bellevue ...	12.47	6.46	2.64	5.01	14 03	15.03	20.90	18.46	14.92	15.68	21 00	18.65	165.25
Blenheim ...	6.20	2.90	1.30	1.79	4.74	9.98	20.93	16.94	8.84	22.48	10.49	8.16	114.75
Botanical Gardens...	6.25	1.90	0.66	1.46	3 18	4.42	13.64	11 28	4.88	10.98	6 86	13.65	79.16
Canefield ...	7.22	2.03	0.07	1.45	4 09	5.17	18.37	13.70	4.75	10.94	5.76	12.32	85.87
Castle Bruce ...	4.99	2.61	3.35	2.30	3.40	9.92	11.43	17 60	10.95	20.68	12.95	4.05	104.23
Everton ...	8.88	2.89	1.25	3.58	6 93	6 51	20.83	15 30	7.24	12.61	14 68	17.50	118.20
Fontaine ...	7.47	5.28	1.49	4.84	10.11	11.70	14 70	16 50	11 78	13 54	12 58	14 72	124.71
Goodwill ...	6.42	2.16	0.38	1.23	2.82	4 63	15.45	16 23	5.23	12.15	7 36	15.26	89.32
Governor ...	5.28	3.52	2.23	4.90	8.00	12.25	14.47	16.86	10.91	19.04	16.30	8.50	122.26
Hillsborough ...	6.32	1.62	1.34	0.70	2.52	5.37	17.22	11.72	6.02	10.21	7.99	12.86	83.89
Lakeside ...	32.87	12.04	4.40	16.05	29 07	33.84	41 16	33.39	25.70	47.70	39 55	23.60	339.37
Moore Park ...	6.03	2.62	1 30	1.77	3.45	9.90	16 57	16 44	8.63	19.15	8 88	7.39	102.13
Morne Bruce ...	7.46	2.22	1.23	1.19	4.66	4.92	15.65	13.48	5.54	12.32	7.50	14.62	90.79
Picard ...	7.47	1.97	0.36	2 08	2.79	9.66	18 59	12.54	5.68	8.71	6 35	7.68	83.88
Pte. Mulâtre ...	4.74	4.62	0.33	4.00	5 38	8.26	10 19	15.85	11.16	15.13	10 69	6 98	97.33
Rosalie ...	5.68	4.87	1.99	3.82	4 33	9.81	13.41	21 08	16.84	18.03	18.12	5.36	123.34
Shawford ...	24.92	2.75	0 29	5.78	14.30	18.97	48.07	25 80	34.22	38 52	41.00	27.28	281.90
Sherwood ...	17.73	5.60	1.60	4.30	11.28	14.33	33 84	20.08	11.15	26 15	17.26	23 09	186.41
Soufrière ...	4.06	4.00	1.66	3.65	6.15	6.66	15 16	9.30	5.30	8 65	10.48	9.27	84 34
St. Aroment ...	9.09	2.98	0.52	3.26	5.37	5.40	19 74	12.52	5.17	12.96	8.27	14.14	99.42
Stowe ...	6.75	5 31	0.69	3.17	7 55	10.68	12 50	13.79	8.88	11.78	10.96	9.03	101.09

Mean Rainfall 23 Stations 121.68
,, ,, 11 Leewards Stations ... 85.09
,, ,, 4 Windward ,, ... 106.49
,, ,, 5 Inland ,, ... 219.53
,, ,, 3 Lasoye ,, ... 113.04